Ethernet Extension Experts

Enable-IT 350
Power over Ethernet Injector
User Manual

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ABOUT THIS GUIDE

This guide provides all the information needed to install and use the Enable-IT 350 Power Over Ethernet Injector This guide is intended for use by technicians who are responsible for installing and setting up network equipment. Consequently, it is assumed that the installer has a basic working knowledge of LANs (Local Area Networks) and voice telecom wiring.

If the information in the release notes that are shipped with your product differs from the information in this guide, follow the instructions in the release notes.

Most user guides and release notes are available in Adobe Acrobat

Reader Portable Document Format (PDF) or HTML on the Enable-IT World Wide Web site: http://www.ethernetextender.com/manuals/350 manual.pdf

INTRODUCING THE 350 POWER OVER ETHERNET INJECTOR

Congratulations on purchasing the Enable-IT's 350 Power Over Ethernet Injector — the simplest to enable your Power Over Ethernet devices.

The 350 Power Over Ethernet Injector offers a low cost single port solution in a simple design for rapid install using existing Ethernet cabling.

This chapter contains introductory information about The 350 Power Over Ethernet Injector and how it can be used in your network. It covers the following topics:

- About the 350 Power Over Ethernet Injector
- Key Benefits
- Summary of Features
- Typical Applications

About the 350 Power Over Ethernet Injector

The 350 Power Over Ethernet Injector solves the problem of high costs associated with adding additional electrical outlets in hard to reach places for your LAN equipment such as Wireless Access points or security cameras.

Power-Over-Ethernet (PoE) Compatible

The 350 is a Compact IEEE 802.3af standard Power Over Ethernet Injector which provides 48 VDC over any wiring and up to unexpected extended distance. The units are fully compatible with industry-standard IEEE 802.3af Power-over-Ethernet (PoE) devices and 10/100 Base-T Ethernet networks, providing both Ethernet data pairs as well as the PoE DC power feed.

48 Volts are applied on pins 4, 5, 7 and 8 in separate lines not bridged. The units are compatible with both normal and inverted polarity voltage PoE equipment.

For maximum distance, PoE travels very very far down any type of wiring. Voltage drops over distance using wires. At 200M, you lose maybe 4 or 6 volts. At 48VDC, that leaves you with 42 volts. You can determine the amount of voltage drop over a distance by finding the resistance of the cable for a specific temperature (given in ohms/1000ft) from the cable manufacturer or electrical wholesaler. If you know the largest amount of current that will flow in the cable, when use the formula: Vdrop = Current X Distance (Ft) X 2 X Ohms per 1000Ft.

As a rule of thumb you will loose 6V per every 100′ - 200′ of wiring, depending on the gauge. Lower power also means more amperage means more heat and perhaps issues with the 24 gauge wires in CAT5. You may need to use 18 gauge wiring. For all intensive purposes anything greater than 400′ use a 48V POE.

Keep in mind that Ethernet data has a limit of 328ft or 100m. You can easily solve this issue by using the Enable-IT 350 PoE Injector with an Enable-IT 865 PoE Ethernet Extender kit. Using the 865 kit will drive your PoE and data up to 1,500ft.

Key Benefits

The following list identifies the 350 Power Over Ethernet Injector key benefits.

- Provides 48VDC PoE to any IEEE802.3af devices at great distances*.
- Rapid installation with small box profile, no programming and no firmware to upgrade. Maintains existing RJ-45 Ethernet Data.

The Enable-IT™ 350 48VDC Power over Ethernet Injector is single port IEEE 802.3af compliant Midspan solution that is a compact and easy to install with RJ-45 Ethernet cabling. This elegant unit is ideal for installing any WiFi Wireless Access Point, Security camera or other PoE powered equipment. It eliminates the need for external power supply and its associated AC/DC power cabling, providing a compact, affordable, safe and reliable power solution over your wiring or existing Ethernet infrastructure.

Summary of Features

The Enable-350 Power Over Ethernet Injector has the following hardware features:

- 48 VDC Output 802.3af Power Over Ethernet Injector
- 19W, Cispr 22'B', VCCI 'B', FCC 'B' Compliance.
- Rapid installation - no programming required.
- Maintains existing RJ-45 Ethernet Data.
- Supports VoD (Video on Demand) and MPEG IP channels.
- Supports VoIP (Voice over IP).
- Network Equipment independence - Transparent to protocols/applications/MAC.

The Enable-IT 350 PoE Injector can be used with the Enable-IT 380 PoE Range Extender/s to drive your full PoE strength up to 7,200ft.

Product Specifications

- Power
  48 V, .04A - AC input 90 ~ 264V
- Data Rate
  100Mbps full-duplex
- Interface
  Ethernet: RJ-45 Standard
- Dimensions
  Height 3" (85mm) Depth 1.5" (40 mm) Width 2"(60mm)
- Environment
  Operational Temperature : 13°-140°F (-25°-60°C)
  Humidity: 5%-90%, non-condensing
- Enclosure
  Square plastic casing with dual RJ-45 Network ports

Typical Applications

Enable-IT 350 Power Over Ethernet Injector unit is very lightweight and compact for most all applications and use. These units are easy and rapid to install with plug and play RJ-45 Ethernet jacks to quickly insert your wiring and go.

As a 802.3af compliant device, the Enable-IT 350 48VDC Power over Ethernet Injector uses all 8 wires in a category rated wiring bundle, ie. CAT5e run. As will all PoE voltage drops over distance. As a rule of thumb you will loose 6V per every 100′- 200′ of wiring, depending on the gauge. Lower power also means more amperage means more heat and perhaps issues with the 24 gauge wires in CAT5. You may need to use 18 gauge wiring. The Enable-IT 350 is a 48V power injector to maximize your distance and output.

The Enable-350 Power Over Ethernet Injector is suited for the following key environments:

- **Commercial Buildings (Multi-Tenant Units)**
- **Business Parks (Multi-Tenant Units)**
- **Apartments (Multi-Residential Units)**
- **Hotels (Multi-Hospitality Units)**
- **Business Suites (Multi-Hospitality Units)**
- **School Campuses (University, K-12)**
- **College Housing (Multi-Residential Units)**

Figure 1 Enable-IT 350 to a 8424 WiFi PoE Access Point

INSTALLING THE 350 POWER OVER ETHERNET INJECTOR

Unpacking the Enable-IT 350 Power Over Ethernet Injector

Carefully remove the Enable-IT 350 Power Over Ethernet Injector from all packing materials in the box. Verify that the items listed below are present. Make sure that the equipment supplied matches what you ordered. If any items are missing or damaged, please contact your Enable-IT or your distributor for assistance.

- (1) The Enable-IT 350 Power Over Ethernet Injector
- Enable-IT 350 Power Over Ethernet Injector User Manual (this manual)

Performing the On-Site Installation

❶ Locate the power source for connecting the supplied power cord and attach this power cord to Enable-IT 350. You can apply power to the unit.

❷ Insert a standard Ethernet patch cord to the Data/PoE out port - the other end of the Ethernet Patch cord is for your PoE equipment or Enable-IT 820 PoE and Ethernet Extender (Data/PoE in port)

❸ Insert a standard Ethernet patch cord into the Data In port and connect the other end of the Ethernet Patch cord to your Local LAN device such as a switch.

Technical Support

Enable-IT OEM Technical Support is available directly to customers and distributors. All support requests are processed through the online support portal. This allows us to provide assigned support ticket numbers in order to bring closure to any technical issues.

Online Technical Services

The Enable-IT Support Portal is available 24/7. No password or user account is necessary. Please use this support website as your first source for help as it contains an on line knowledge base of articles, documentation, FAQ's and other problem-solving resources. This web-based support resource provides the quickest solution to the most common technical support issues.
http://www.ethernetextender.com/support/support_overview.php

Returning Products for Warranty Repair

Enable-IT, Inc. warrants to the original purchaser of the Product ("you" or the "End User") that, for the one (1) year period commencing on the date the Product was purchased (the "Warranty Period"), the Product will be substantially free from defects in materials and workmanship under normal use and conditions. **Electrical damage is not an item that is covered under this warranty or extended warranties.**

If authorized by Enable-IT to return a Product which does not conform to the warranty set forth above, the End User must: (1) obtain a return materials authorization (RMA) number from Enable-IT by contacting the Customer Service Dept. at 888-309-0910 between the hours of 8:00 a.m. and 5:00 p.m. PST and otherwise fully comply with Enable-IT's then-current RMA policy; (2) return the Product to Enable-IT, Inc. in its original packaging freight pre-paid; and (3) provide to Enable-IT the original receipt or bill of sale establishing the date on which the Product was purchased.

Please ship Authorized RMAs to:

Enable-IT Processing Facility
16600 Harbor Blvd, Ste G
Fountain Valley, CA 92708

Returning Products for Refund

30-Day refund applies to single kit Ethernet Extenders only and is subject to a 15% Restocking Fee. Shipments without valid / authorized RMA number or sent to our corporate Las Vegas Address can be refused and or billed for additional shipping.

ENABLE-IT LIMITED WARRANTY

Enable-IT warrants the Enable-IT 350 Power Over Ethernet Injector solely pursuant to the following terms and conditions.

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a. Express Warranty Enable-IT warrants to the original purchaser of the Product ("you" or the "End User") that, for the one (1) year period commencing on the date the Product was purchased (the "Warranty Period"), the Product will be substantially free from defects in materials and workmanship under normal use and conditions. This warranty does not apply to Products which are resold as used, repaired or reconditioned or consumables (such as batteries) supplied with the Product. **Electrical damage is not an item that is covered under this warranty or extended warranties.** Enable-IT does not make any warranty with respect to any third party product, software or accessory supplied with or used in connection with the Product and such third party products, software and accessories, if any, are provided "AS IS." Warranty claims related to such third party products, software and accessories must be made to the applicable third party manufacturer.

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c. Conditions for Warranty Qualification If authorized by Enable-IT to return a Product which does not conform to the warranty set forth above, the End User must: (1) obtain a return materials authorization (RMA) number from Enable-IT by contacting the Customer Service Dept. at 888-309-0910 between the hours of 8:00 a.m. and 5:00 p.m. PST and otherwise fully comply with Enable-IT' then-current RMA policy; (2) return the Product to Enable-IT in its original packaging freight pre-paid; and (3) provide to Enable-IT the original receipt or bill of sale establishing the date on which the Product was purchased.
Products returned to Enable-IT without an RMA number will be returned to the End User.
Enable-IT shall not be responsible for damage or loss during shipment of the returned Product to Enable-IT.

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CONTACT US

European Sales:
+44 1 908 560200
+44 1 908 565533 fax
http://www.enable-it.eu
sales@enable-it.eu

North American Sales:
+1 888 309-0910
+1 866 389-8655 fax
http://www.enableit.com
sales@enableit.com

Asia Pacific Sales:
+61 02 8898-9622
+61 2 9939-0005 fax
http://www.enable-it.com.au
sales@enable-it.com.au

Middle East Sales:
+971-50-435-8310
http://www.enableit.com
sales@enableit.com

Other International:
+1(619) 795-1697
+1 320-215-6907 fax